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P R E F A C E.

IN the year 1796 the Society received the following Letter.

“ GENTLEMEN,

“ AS Executors to the late WILLIAM
“ BENSON EARLE, of the Close of Sarum,
“ Esq. we have transmitted to you the
“ following Extract of his Will.

“ I give and bequeath to the President
“ and Members of the Society in London,
“ established for the Encouragement of
“ Arts, Manufactures, &c. for the time
“ being, the sum of two hundred guineas,
“ in trust, that they respectively do apply
“ the whole of the said sum of two hun-
“ dred guineas, or the annual interest of
“ the same, at their discretion, in the pur-

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“ chafe of Books for the Public Library of
“ the faid respectable Society.

“ We are, Gentlemen,

“ Your humble Servants,

“ J. SKINNER.

“ EDMUND BENSON.”

“ *Sarum, April 6, 1796.*

“ The Prefident and Members of
“ the Society for Arts and Ma-
“ nufactures, London.”

In confequence of this bequest, the Society, willing to tranfmit to pofterity the refemblance of their Benefactors, having applied to the Gentlemen above named, Executors to Mr. Earle, have obtained from them a Drawing, which is faid to have been, at the time it was taken, a very good likenefs of him: from this Drawing, the Print, which ferves as a Frontifpiece to this Volume, has been engraved; and, it is prefumed, the Public will hereby fee what attention the Society pay to thofe who fhall contribute to encourage and fupport the views and intention of the Institution.

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As the disposition of the various parts which constitute the Volumes of the Transactions of this Society, and which has been followed during some years, is found fully to answer the end proposed, no alteration is made therein: it may, therefore, be unnecessary to say more on that head, but proceed to state to the Reader the new Objects of Reward which have this Session been adopted, and give some reasons for the introduction of them.

At Class 100, under the head of Agriculture, a new Premium will be found for harvesting Corn in Wet Weather. It is many years since the Society first offered a Premium for discovering a Method of making Hay in Wet Weather; and however difficult the accomplishing that end may appear, yet the inestimable advantages the Public would receive, if a good means of doing it could be discovered, and the pleasing reflexion, that many things, formerly thought impracticable, have of late years, from the improvements in mechanical and chemical knowledge, been re-

duced to practice, has induced the Society to offer a Reward for Harvesting Corn in unpropitious seasons, an object peculiarly interesting to mankind in general, and more particularly so to this kingdom. Let us therefore hope, that, by the perseverance of the Society, and the ingenuity of the Public, some methods may be found to alleviate those inconveniences which this country, from its insular situation, is so peculiarly subjected to.

In a former Volume of these Transactions, it has been clearly proved, by the most satisfactory evidence, that Opium of the finest quality has been, and consequently may be, produced in this climate. It remains therefore now to try, whether it can be obtained in such quantity, and at such price, as may make it an article of trade: to ascertain this fact, the Society have, in this Volume, first offered Premiums for preparing Opium in large quantities, in England. When the great importance of this drug in medicine, and the abominable adulterations it is liable to, are considered,

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considered, it will appear to every judicious observer, that a more proper object of the attention and encouragement of the Society can hardly be found.

Under the Class of Polite Arts, the Society have this year offered their Silver Medallion, in conformity to the Will of the late John Stock, of Hampstead, Esq. for a Drawing of the Statue of the late Joshua Ward, Esq. which was presented by the heir of that gentleman to the Society, and placed, with peculiar propriety, in their Great Room, Mr. Ward having been the person to whom this kingdom owes the discovery of making Vitriolic Acid, on a large scale of business, from Sulphur, and thereby establishing a Manufacture of the utmost importance to the Dyers, Calico-Printers, &c. of this country.

The frequent accidents which happen to passengers in carriages, from the horses taking fright, and the dreadful consequences to persons employed in the manufacturing Gunpowder, from the explosion of the mills, have induced the Society, this

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year,

year, to offer considerable Rewards for the discovery of such means as may obviate those inconveniences and prevent such disasters in future.

It has hitherto been the custom, since the separation of the United States of America from this Country, to confine the Premiums offered by the Society, under the Class of Colonies and Trade, to the Islands in the West-Indies; but information having been received that a particular species of Cotton was produced in some of the British Settlements in Indostan, which might be of use in the Manufactures of this kingdom, an honorary Premium has been this Session offered for importing a quantity of such Cotton, that a fair trial may be made of it. The same also may be said of Annatto and Cochineal, both which used to be imported at a considerable annual expence from foreign countries, but which, from accounts lately received, there seems great reason to believe, may, under proper encouragement, be produced in some of those

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those parts of the East-Indies that are under the dominion of the British Government.

It is presumed, that whoever attentively peruses the various Papers which form the most considerable part of this Volume, will receive satisfaction at finding the progress making in the several Departments that are the more immediate objects of the Society's attention and encouragement:—as, in Agriculture, it must be highly pleasing to observe the quantity of Trees of various sorts planted; the number of Acres of Land improved by draining, and other kinds of culture, some of which have taken place in the distant and mountainous parts of the kingdom, where, in general, cultivation has hitherto made but slow progress; but it is hoped and believed the examples now set before the inhabitants of those districts will be attended with the most beneficial advantages, not only in their immediate neighbourhood, but ultimately to the country at large.

It was mentioned in the Preface to the Fourteenth Volume of these Transactions,

that the Society had been induced, from the high price of Wheat, to offer a Premium, in the Class of Chemistry, to any person who should prepare a quantity of Starch from a material, not the food of Man: in consequence of this offer, the Society has this Session received a proper quantity of Starch, manufactured from the Roots of the *Arum Maculatum*, a plant hitherto not generally applied to that purpose, but which is known to grow spontaneously in almost every county.

The Reader will find, in the subsequent pages, a full account, under the head of Polite Arts, of a method that has been successfully practised for transferring Pictures from Pannels or Walls to Canvass—an art universally allowed to be highly useful: and as three Pictures so transferred, one of them from the wall of a stair-case, and the others from oak boards, were produced to the Society, there can be no doubt of the practicability of the process. It must be allowed that, in the Gentleman's Magazine for the year 1753, the first account of a process for
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restoring decayed Paintings seems to have been published in the English language; and, in the Appendix to the Second Volume of the *Handmaid to the Arts*, printed in 1764, a process very similar to that in the *Gentleman's Magazine* is inserted; but, from the nature of the *Aqua-fortis*, and some other materials therein recommended to be used, it seems altogether improbable that either of those methods could answer the end proposed: and as what Mr. Salmon has now given to the Society, and is printed in this Volume, has been fairly and experimentally tried, it will be very pleasing to the Society to be further informed of the merits of the process by any persons who may be induced to make further trials of it.

It is now several years since the Society first offered a Premium for the best practical and economical plan for the Maintenance and Employment of the Poor in Parish Workhouses. A claim for that Premium has this Session been produced; and although the Dissertation sent in discovered
considerable

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considerable merit as a literary performance, and contained many observations practically useful relative to the Management of the Poor, yet, as it did not fully answer the intention of the Society in offering the Premium, the Candidate could not be considered as entitled to the whole Reward; but, in consideration of the merit of the work, Twenty-five Guineas were voted to him, and the publication of the paper submitted to the author, who has engaged to print it.

Among the various Contrivances, under the head of Mechanicks, that have been produced to the Society in the course of this Session, and which are fully described and illustrated by plates in this Volume, a very considerable improvement will be seen in the construction of the Press used for Packing Bale Goods, as well as in the Chaff-Cutter; both which, it is presumed, will be found of great utility, and readily applicable to the purposes for which they are intended.

Hitherto mention has only been made in this Preface of some of the honorary and
pecuniary

pecuniary Rewards that have been bestowed during the Session of 1796 and 1797; but it may not be improper here to say, that the Public Thanks have been also given to various Societies and Individuals for Presents received, and such other attention to the views of this Institution as they may have thought proper to bestow on this Society. Among these must be particularly enumerated Lord Romney, and Lewis Majendie, Esq. to the former of whom the Society are obliged for a large quantity of the Seed of the Swedish Turnep, and, to the latter, for a Sack of Wheat of a particularly fine quality; both of which have been distributed among those Members who are most likely to make fair trials of them. To Dr. Evans, of Shrewsbury, and to General Melville, Thanks have also been voted: to Dr. Evans, for the valuable present of two Maps of North Wales, which are reserved in the Society's Collection; and to General Melville, for his first having set apart a quantity of Land, in the Island of St. Vincent, for the purpose of a Botanic Garden,

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in the year 1765, when he was Governor of the ceded Islands in the West-Indies, and afterwards by his zealous exertions, encouragement, and care, bringing the same to a great degree of perfection.

It remains now only thus publicly to invite the ingenious to continue to submit their works to the inspection of the Society, from whom they will not only obtain a due portion of honour and profit, but may be assured their names will be transmitted to posterity, among those who have been the chief instruments in promoting the interests, the riches, and the substantial glory of their Country, by assisting to increase the Arts, the Manufactures, and the Commerce of the Kingdom, from whence only such interest, such riches, and such glory, can be derived.

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